APHIS – Plant Protection and Quarantine
Situation Report: Panicle Rice Mite (PRM)
Steneotarsonemus spinki
October 12-17, 2007

Updates in red

Survey and Diagnostics Information:

- **Survey**

  Texas

  - A total of 152 sites (13 greenhouses; 51 research fields; 1 compost pile; and 87 commercial production fields), have been surveyed at a rice research facility in Alvin, Brazoria County, Texas. Positive detections have occurred at this site.

  - On August 4, approximately 190 acres were sampled from a seed farm in Jackson County, TX. All samples from this facility were negative.

  - On August 8, survey methods started at a research station operated by a university in Beaumont, TX. Surveys were concluded the following day. All field samples have tested negative.

  Louisiana

  - A total of 30 sites (4 greenhouses; 23 research fields; and 3 outside greenhouse areas), have been surveyed at a rice research facility in Rayne, LA to date. This facility, which is used as an experimental research station, is operated by an educational institution to research varietal improvement and agronomic management practices. Positive detections have occurred at this site.

  - On August 9, a commercial rice field was sampled in Kaplan, LA by Smuggling Interdiction and Trade Compliance Program personnel (SITC) following analysis of a suspect sample collected by a plant pathologist and county extension agent. Positive detections have occurred at this site. An additional 5 commercial fields have been surveyed resulting in positive finds.

  Arkansas

  - A total of 50 sites (12 greenhouses; 36 research fields; and 2 outside greenhouse areas), have been surveyed at a rice research facility in Stuttgart, AR. This facility, which is used as an experimental research station, is operated by USDA's Agricultural Research Service (ARS) and an educational institution. PRM detections have occurred at this research location. Surveys have also been conducted at 35 commercial production fields throughout 11 counties in the eastern portion of AR. To date, all samples have been negative.

Maryland

- On October 16, a site visit was conducted at the USDA, National Plant Germplasm Inspection Station, located in Beltsville. This facility receives noncommercial rice imported under departmental permits. Procedures for inspecting and treating the rice seeds were observed, as well as the greenhouse management practices. Both the Plant Inspection Station and research greenhouses were sampled and resulted in negative finds.

- **Identification and Diagnostics**
  - Since the initial detection in 1 of the greenhouses at the rice research facility in Alvin, TX on July 13, additional PRM detections have occurred at 3 other greenhouses, 5 research fields, 1 compost pile, and 5 commercial production fields at this site.

  - On August 1, a rice field in Lajas, PR, operated by the same research facility in Alvin, TX, was confirmed positive for PRM.

  - On August 10, three greenhouses tested positive for *S. spinki* in Beaumont, TX. Movement restrictions have been placed on the greenhouses and employees have been notified. SITC in Houston to work on trace information.

  - On August 21, an educational institution greenhouse in Rayne, LA was confirmed positive through morphological analysis. Since the initial greenhouse detection, 2 greenhouses, 12 research fields, and 1 location outside of a greenhouse have been detected for PRM at different locations operated by the facility.

  - On September 7, three greenhouses in Stuttgart, AR were confirmed positive at an ARS facility. Since the initial detection, one research field has been found positive. Also in Stuttgart, one greenhouse operated by an educational facility has been confirmed positive. Since then, the PRM has been found in 4 small research field plots and one location outside of a greenhouse at the university.

  - On September 10, a commercial production field in Kaplan, LA was confirmed positive during a SITC follow-up survey. Since the initial detection, 5 additional fields have been found positive.

  - On September 14, a greenhouse in Ithaca, NY was confirmed positive for PRM. This facility, which is used as an experimental research station, is operated by an educational institution.

  - On October 10, 2007, the USDA's National Identification Service, Domestic Diagnostics Coordinator issued the *Panicle Rice Mite Extraction, Screening, Identification, and Communication* Guidelines.

- **Technical Working Group (TWG)**
  - APHIS has established a technical working group (TWG) of experts to discuss survey and control strategies in response to PRM. The group will continue to meet on a regular basis to address this developing situation and consider mitigation strategies.

- Treatment recommendations for PRM by the TWG were first issued on August 15. Revisions to the recommendations are based on best available science at the time and known pest information.

- **Incident Command**
  - A total of 5 personnel are on-site in LA (4-APHIS and 1-LDAF).

- **Regulatory Actions**
  - APHIS has issued Emergency Action Notifications (EAN) to stop movement of all rice seed, rice plants and plant parts, and farm equipment when positive detections occur.

- **Trace-back and Trace-forward**
  - Trace-back and trace-forward investigations to determine the source and potential distribution of PRM continue at all locations.

- **Treatment**

  Texas
  - The infested greenhouses in Alvin were treated by the rice research facility on July 17 with the insecticide dimethoate to suppress the mite levels, until the TWG recommendations are implemented.

  Louisiana
  - Two of the commercial fields in Kaplan have been plowed. The third field will be plowed shortly. The farmer was granted permission to flood the other three fields for crawfish farming this winter/spring. Upon the draining of the crawfish ponds in late spring 2008 the fields will either go fallow, or be planted with a crop other than rice. PPQ will survey the ponds during the winter and spring sampling rice stalks for mite analysis.

  Arkansas
  - A greenhouse in Stuttgart used by an educational institution was fumigated using methyl bromide on 10/5/07 in accordance with the TWG recommendations. Educational officials plan to leave greenhouse host free for next few months.

  - The infested rice plant trash pile at the educational institution was burned under PPQ supervision on 10/10/07.

  - The four infested educational institution research plots are in the process of being mowed down, burned and disked.

Trade Update:

- APHIS is in the process of informing the NAPPO member countries and other trading partners.

Communication and Outreach:

- SPRO letter issued on July 24 for the Alvin, Texas.

- A meeting with the Texas Rice Industry was held on July 31, to discuss the PRM situation in Brazoria County, Texas. Approximately 20 industry representatives of rice growers in Brazoria County attended an informational meeting hosted by APHIS and TDA. TDA and APHIS personnel gave an overview of survey and regulatory activities, while ARS staff provided a biological overview of the pest. Growers responded positively to a solicitation for volunteer sampling of non research related fields in the county.

- SPRO letter issued on August 7 for the Lajas, Puerto Rico.

- LSU AgCenter News Brief was released 9/7/2007 at http://www.lsuagcenter.com/en/communications/news/headline_news/Tiny+Rice+Pest+Found+In+South+Including+Louisiana.htm

- SPRO letter issued on August 31 for the Rayne, Louisiana.

- SPRO letter issued on September 17 for the Stuttgart, Arkansas.

- SPRO letter issued on September 17 for the Ithaca, New York.

- USDA, APHIS, PPQ established a PRM website for public information at http://www.aphis.usda.gov/plant_health/plant_pest_info/rice_mite/index.shtml

Background:

- On July 13, 2007, USDA's Animal and Plant Health Inspection Service (APHIS) confirmed the detection of panicle rice mite (PRM), *Steneotarsonemus spinki*, at a rice research facility in Alvin, Brazoria County, Texas. The research is facility is operated by a private entity, where it conducts hybrid rice research.

- The PRM is considered a serious rice pest in China, Philippines, and Taiwan, where it has caused substantial crop losses. Yield losses can range from 30 to 90 percent.

- In 1997, the pest was detected in the Caribbean region where it is now known to affect Cuba, the Dominican Republic, and Haiti. In 2002, the mite was reported in Costa Rica and Nicaragua and, in 2005, in Colombia. Recent reports also indicate its presence in Mexico.

- Interceptions of this pest have been reported at greenhouses in Ohio and Texas during the last 10 years.

- There are two main reported hosts of RPM, Rice, *Oryza sativa*, and the weedy red rice, *Oryza latifolia*.